UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/526,441	03/16/2000	Kamran Ahmed	10442-4"US" JA/mb JA/mb	2595

20988   7590   09/08/2003

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ART UNIT	PAPER NUMBER
2672	

DATE MAILED: 09/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _11 June 2003_ .

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-33_ is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-33_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

     If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All b)☐ Some * c)☐ None of:

         1.☐ Certified copies of the priority documents have been received.

         2.☐ Certified copies of the priority documents have been received in Application No. _____ .

         3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

     a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)   4) ☒ Interview Summary (PTO-413) Paper No(s). _22_ .

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)   5) ☐ Notice of Informal Patent Application (PTO-152)

3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .   6) ☐ Other: .

Response to Amendment

1.   The amendment filed on 06/11/03 has been entered. Claims 1, 2, 5, 12, 13, 15,

17, 19, 21, 22, 25 and 28 were amended by this amendment. Claims 1-30 were

presented for consideration. Claims 31-33 appear to be still pending, thus, they will be

considered below even though applicant did not follow the rules for making

amendments.

The amendment to the paragraph at page 4 line 13 is noted. Applicant failed to

highlight the changes made to this paragraph. It is clear lines 4-6 were added to this

paragraph. This amended paragraph has been entered even though applicant did not

follow the rules for making amendments to the specification.

The amendment to the paragraphs at pages 7, 8, 10, and 11 have been entered.

The amendment to the paragraph at page 10 line 13 now leaves figure 5 without

a detailed description.

The amendment to the paragraph at page 10 line 13 is not exactly correct

because the first occurrence of figure 8 should be figure 7, see page 12 of this response

and figure 7.

Response to Remarks

2.   Applicant's arguments filed 06/11/03 have been fully considered as follows.

On page 10 first paragraph applicant addresses Figure 6. If the 10/28/02 Figure

6 is amended to show three zoom buffers then figure 6 will be approved. This is

supported by the specification at page 6 lines 1-3, page 10 lines 26-27, and page 11 lines 6-10.

On page 10 first paragraph applicant addresses the description of figure 4, as noted above, the changes made to page 10 line 13 is approved.

On page 10 last paragraph to the middle of page 11 applicant states figure 5 is described on page 10 line 24, however, applicant failed to amend page 10 line 24, it still refers to figure 6, the proposed changed to page 10 line 24 is approved. It should be noted that this change will result in figure 6 having no detailed description.

On page 11 applicant addresses the objection to the specification set forth in paper no. 20 paragraph 4 concerning the non integer fraction. Applicant remarks are persuasive, this objection is withdrawn.

On page 12 applicant addresses the objection amended paragraph on page 7 line 28 and page 11line 12, as noted above, the changes made to 7 line 28 and page 11line 12 is approved. As noted above the first occurrence of figure 8 should be figure 7, see page 12 of this response and figure 7.

On page 13 first several paragraphs applicant addresses the objection to the amendment to page 4 line 13, as noted above, the changes made to 4 line 13 is approved.

On page 13 next to last paragraph applicant addresses the objection to claims 13 and 28 which was set forth in paper no. 20 paragraph 8. The changes made to claims 13 and 28 overcomes the objection.

In the paragraph spanning pages 13 to14 applicant addresses the 35 USC 112 first paragraph rejection of claims 5 and 25.   Applicants arguments are persuasive.

In the first full paragraph on page 14 applicant addresses the 35 USC 112 first paragraph rejection of claims 1, 2, 5, 12, 13, 17, 21, 22 and 24. The amendments to these claims overcomes this rejection.

In the second full paragraph on page 14 applicant addresses the 35 USC 112 second paragraph rejection of claims 5 and 5-20. The amendment to the parent claims overcomes this rejection. The amendment to claims 15 and 19 overcomes the rejection of those claims under 35 USC 112 second paragraph.

On page 14 next to last paragraph to page 16 applicant addresses the 102 and 103 rejection of the claims based upon the Ranganathan reference. The amendments to the claims and applicants remarks overcomes this rejection.

Drawings

3.   The amendment to the paragraph at page 10 line 13 now leaves figure 5 without a detailed description. The amendment to the paragraph at page 10 line 13 is not exactly correct because the first occurrence of figure 8 should be figure 7, see page 12 of this response and figure 7.

Claim Rejections - 35 USC § 112

4.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

5.   Claims 17 and 18 are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention. In claims 17 and 18 "said main display surface"

lacks antecedent basis due to the amendment to claim 15.

Claim Rejections - 35 USC § 102

6.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by
> another filed in the United States before the invention by the applicant for patent or (2) a patent
> granted on an application for patent by another filed in the United States before the invention by the
> applicant for patent, except that an international application filed under the treaty defined in section
> 351(a) shall have the effects for purposes of this subsection of an application filed in the United States
> only if the international application designated the United States and was published under Article 21(2)
> of such treaty in the English language.

7.   Claims 1-30 are rejected under 35 U.S.C. 102(e) as being anticipated by Boger,

U.S. Patent No. 6,515,678.

Boger teaches a display controller system for controlling a display 914 and a host

computer, column 7 lines 63-67, that runs the software that forms and stores the image

to be displayed on display 914. Display controller system 900 controls the display of the

image on display 914 by converting the image to a resolution corresponding to the

display's resolution, allowing the user to select a portion of the image to zoom, and

allowing the user to display the zoomed portion full screen as illustrated in figure 8.

A detailed analysis of the claims follows.

Claim 1:

Boger teaches a method of controlling a display controller system to provide a display

surface zoom, said display controller system having a main surface in a frame buffer

memory (*the image downloaded by the host system is stored in a frame buffer after its*

resolution has been converted by the controller, for example processor 902, this image

is the claimed main surface in a frame buffer memory) and output to at least one zoom

display device (*applicants specification specifies several displays as the zoom display*

including the one displaying the main surface, see claim 12, Boger displays the zoomed

portion on display 914 in addition column 6 lines 45-47 states a user may utilize the total

area of a display device to display the magnified portion of the video data, thus, Boger is

stating that two displays may be utilized, one as shown in figure 7 and one as shown in

figure 8 to show the zoomed image full screen), the method comprising the steps of:

receiving user input defining coordinates of a frame portion within said main surface of

in the frame buffer memory (*the user may elect to zoom a portion of the main surface*

which is stored in the frame buffer, see figure 7 and cursor 706);

determining a resolution of said at least one zoom display device (*column 1 lines 20-*

27, column 3 line 62 to column 4 line 7) and adjusting an aspect ratio (*the aspect ratio*

for the low resolution display is different than the aspect ratio of the high definition

display, column 1 lines 22-24 for example describes 640x480 for high resolution display and 320x200 for low resolution display, it is clear the aspect ratios are different between these two standards, it is clear the aspect ratios between 1024x768 and 320x200 are different as well) of said portion defined by said user input to correspond to said resolution (*resolution of display 914*);

programming said display controller system to implement said display surface zoom to provide a full screen view of said portion on said at least one zoom display device (*column 6 lines 45-47*);

in said display controller system, scaling said portion of said main surface of in the frame buffer memory (*the display controller 900 performs the scaling process rather than the host system, column 6 line 66 to column 7 line 10 and column 8 lines 59-63*);

in said display controller system, converting said scaled portion of said main surface of in the frame buffer memory into a display signal (*a display signal is formed by controller 900 and sent to display 914*); and

outputting said display signal from said display controller system to said at least one zoom display device (*display 914*).

Claim 2:

Boger teaches the method as claimed in claim 1, wherein said step of converting includes incorporating a representation of a cursor (*see figure 7 cursor 706, column 6 lines 40-42*) in said display signal (*for cursor 706 to be displayed along with the image, the cursor is incorporated into the display signal of the image, the claim does not specify*

how this is done), said cursor having a position defined by a cursor position memory (*the coordinates of cursor 706 is inherently stored to allow the system to place cursor 706 to be integrated into the correct location on the image*) used for said main surface in the frame buffer memory (*the image*).

Claim 3.:

Boger teaches the method as claimed in claim 1, further comprising a step of filtering said portion to provide for an image not illustrating coarse pixels (*the third set of video data is filtered by interpolation methods to make a smooth image, column 4 lines 26-29, column 5 lines 39-46*).

Claim 4:

Boger teaches the method as claimed In claim 3, wherein said user input further defines a user's choice of filtering or non-filtering (*if the user selects to perform zooming then filtering may be performed and if the user selects no zooming then non-filtering may be performed*).

Claim 5:

Boger teaches the method as claimed in claim 1, wherein said user input further includes a cursor control device input used to control a cursor (*column 6 lines 22-25*), and said portion is caused to be dragged or moved over said main surface in the frame buffer memory by movement of said cursor (*column 6 lines 40-42*).

Claim 6:

Boger teaches the method as claimed in claim 1, wherein said scaling comprises using a drawing engine (*column 8 line 30, the graphics engine is a drawing engine*) of said display controller system (*system 900*) to scale said portion into a buffer (*graphics engines generate image data, inherently when a graphics engine is present in system 900 it will generate the zoomed portion into the VRAM*).

Claim 7:

Boger teaches the method as claimed in claim 1, wherein said scaling comprises using a backend scaler (*when the optional display system 912 is not in the system, column 8 line 25 900 may further include a display system 912, then the scaler within controller 902 is a backend scaler since a backend scaler is after the memory storing the image to be scaled since when display system 912 is not in the controller 900 then the VRAM is not there either so controller 902 would send data directly to display 914*) of said display controller system to scale said portion.

Claim 8:

Boger teaches the method as claimed In claim 7, wherein said scaling further comprises using a backend scaler of said display controller system to scale a hardware cursor associated with said portion (*any image in the zoomed area may be zoomed by the backend scaler and Boger inherently includes a cursor as one of the images that may be zoomed because at column 1 lines 37-40 Boger describes the user viewing a Web*

page which inherently includes a cursor, the cursor needs to be zoomed to maintain a

proper relationship between the cursor and the image, see figure 8 where a small cursor

would be lost in the very large characters, thus, the claimed hardware cursor is present

in Boger's zoomed portion of the image when the zoomed portion includes the cursor,

since computers are hardware running programs any cursor may be considered a

hardware cursor).

Claim 9:

Boger teaches the method as claimed in claim 6, wherein said scaling further comprises

using a drawing engine of said display controller system to scale a hardware cursor

associated with said portion (*any cursor associated with the image to be zoomed will be*

zoomed by the graphics engine for the reasons given in the rejection of claim 6) into a

separate hardware cursor buffer (*since memory is composed of a plurality of buffers*

with each buffer storing a part of the image, for example a pixel, then Bogers memory

meets the claim to having a separate hardware cursor buffer since the buffers in the

memory which store the image's cursor are separate from the buffers that store the rest

of the image).

Claim 10:

Boger teaches the method as claimed in claim 6, wherein said scaling further comprises

using a drawing engine of said display controller system to scale hardware cursor

associated with said portion and overlay it onto said buffer (*any cursor associated with*

the image to be zoomed will be zoomed by the graphics engine for the reasons given in

the rejection of claim 6).

Claim 11:

Boger meets this claim since it is claiming storing the same image alternately in one of a

plurality of buffers, since memory is composed of a plurality of buffers with each buffer

storing alternating a part of the image, for example a pixel, then Boger's memory meets

this limitation and Boger would alternating read the plurality of buffers to read the one

image to drive the display device 914.

Claim 12:

Boger clearly teaches the method as claimed in claim 1, wherein said display controller

system comprises a single display output (*output into display 914*), and said user input

causes a single display device to switch between displaying said portion and displaying

essentially all of said main surface of in the frame buffer memory (*the user's act of*

selecting a portion for zooming and causing the zoom to be display full screen, column

6 lines 35-47) whereby said zoom is provided independently of an application program

(*the display controller 900 functions independently of the host system's application that*

created and sent the image to controller 900, thus, relieving the host system of the

burden of generating the second and third video data).

Claim 13:

Boger teaches the method as claimed in claim 1, wherein said display controller system

comprises at least two displays outputs (*the claim does not claim the outputs are*

simultaneous, thus, the sequential output of Boger meets this claim limitation), a first

one of which displaying essentially all of said main surface of in the frame buffer

memory, and a second one of which displaying said scaled portion in a full screen view

(*figure 8, column 6 lines 45-47*).

Claim 14:

The image resolution of the second display is greater than the image resolution of the

first display because the amount of image data seen in the second display is greater

than the amount of image data seen in the first display.

Claim 15:

This claim is met by Boger when the user moves the cursor 706 over the image (thus

selecting at least two portions of the main surface) and then selecting the latest portion

for display as full screen.

Claim 16:

This claim is met by Boger when the user selects one portion of the image for zooming

full screen and then selects another portion of the image for zooming full screen and

then reselects the one portion of the image for zooming full screen.

Claim 17:

This claim is met by Boger because with regard to the Web TV example given at column 1 lines 37-40, the Web TV application program would be determined as active to allow the user to manipulate displayed items with a cursor by providing output to the main surface in order to select from the defined portions a displayed item selectable by the cursor and displayed on the main surface associated with the active application program.

Claim 18:

When the application program changes the displayed image changes, thus, the area of the previously displayed image is no longer present, thus, when the active application program changes and the displayed image changes the portion on the zoom display, figure 8, will change accordingly.

Claim 19:

This claim is met by Boger when the displays of figure 7 and figure 8 are in the system, thus, meeting the different zoom display devices limitations. Additionally when the user moves the cursor 706 over the image (thus selecting at least two portions of the main surface) and then selecting the latest portion for display as full screen that portion is displayed on both display devices.

Claim 20:

This claim is met by Boger when the user selects one portion of the image for zooming and then selects another portion of the image for zooming and then reselects the one portion of the image for zooming.

Claim 21:

This independent claim is similar to independent claim 1 with the main difference is this claim claims the fractional portion of the main surface is a non-integer fraction of the main surface. This limitation is met by the user defined area 622, column 6 lines 26-29, thus the user defines the area to be any size, thus meeting the limitation of non-integer fraction of the main surface. The rest of this claim is the same as claim 1 and is rejected for the reasons given for claim 1.

Claim 22:

This claim claims the same limitations that claim 2 claims. This claim is rejected for the reason given for claim 2.

Claim 23:

This claim claims the same limitations that claim 3 claims. This claim is rejected for the reason given for claim 3.

Claim 24:

This claim claims the same limitations that claim 4 claims. This claim is rejected for the reason given for claim 4.

Claim 25:

This claim claims the same limitations that claim 5 claims. This claim is rejected for the reason given for claim 5.

Claim 26:

Boger teaches the method as claimed in claim 21, wherein said scaling comprises using a drawing engine (*column 8 line 30, the graphics engine is a drawing engine*) associated with said display controller system (*system 900*) to generate image data corresponding to said portion (*graphics engines generate image data, inherently when a graphics engine is present in system 900 it will generate the zoomed portion*).

Claim 27:

Boger teaches the method as claimed in claim 21, further comprising a step of accepting user input adjusting said non-integer fraction to be increased and to be decreased (*This limitation is met by the user defined area 622, column 6 lines 26-29, thus the user defines the area to be any size, thus meeting the limitation of non-integer fraction of the main surface*); wherein said user input can cause a zoom magnification to vary upwards and downwards (*a user defined area 622 may cause the area of zoom*

magnification to vary upwards and downwards depending upon how the user defines

area 622).

Claim 28:

Boger teaches the method as claimed in claim 1, wherein the step of determining the

resolution of the at least one display device comprises automatically choosing a

standard resolution (*320x200*) of the at least one display device being closest to a

resolution of said portion (the resolution of the selected portion of the main surface is

320x200), said step of programming including specifying to said display controller

system said closest standard resolution (*the controller system 900 is programmed for a*

resolution of 320x200).

Claim 29:

Boger teaches the method as claimed in claim 28, wherein said display controller

system (*controller system 900*) has full-screen output to a main display device (*figure 7*)

and to said at least one zoom display device (*figure 8, column 6 lines 45-47 states a*

user may utilize the total area of a display device to display the magnified portion of the

video data, thus, Boger is stating that two displays may be utilized, one as shown in

figure 7 and one as shown in figure 8 to show the zoomed image full screen).

Claim 30:

Boger teaches the method as claimed in claim 28, wherein said at least one zoom

display device comprises a CRT display at column 8 lines 31-32.

Claims 31-33:

These claims claims the same limitations that claims 28-30 claim. These claims are

rejected for the reason given for claims 28-30.

8.   Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

9.   Any inquiry concerning this communication or earlier communications from

the examiner should be directed to Jeffery A. Brier whose telephone number is (703)

305-4723. The examiner can normally be reached on M-F from 6:30 to 3:00.

        If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Michael Razavi, can be reached at (703) 305-4713).

Any response to this action should be mailed to:

        Commissioner of Patents and Trademarks

        Washington, D.C. 20231

or faxed to:

        (703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal

Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the Technology Center 2600 Customer Service Office

whose telephone number is (703) 306-0377.

Jeffery A Brier
Primary Examiner
Art Unit 2672